they must estimate costs that will not be paid out in some cases for many years. In that sense, AT&T's sensitivity analysis just points to the obvious. It does not mean the estimation should not be attempted, that the use of different assumptions by different carriers is suspect, or that the accrued costs should not be recovered. The Commission has allowed carriers to recover their accrued pension costs under SFAS 87 even though they are also sensitive to changes in accrual assumptions.[59] In addition, as described above, the accruals developed in accordance with SFAS 106 are subject to review by outside auditors and regulators. Just as the Commission determined of SFAS 87 expense, this outside review provides a significant incentive to properly calculate the accruals.[60]

In any case, AT&T's sensitivity analysis is of questionable value. AT&T's consultants did not have or attempt to replicate the Pacific Companies' actuarial model. As they state, their "report does not present the results of a formal SFAS 106 valuation. Also, it does not attempt to verify any of the SFAS 106 liabilities or expenses reported by another of the LECs." AT&T, App. F, p. 2. To illustrate this point, it is only

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59 See above, p. 40.

60 See GAAP in Part 32, 2 FCC Rcd at 6677 (para. 14).

necessary to consider the Bureau's current evaluation of the Switching Cost Information System (SCIS) model in CC Docket No. 92-91. The Bureau ordered the SCIS model to be disclosed to and evaluated by an independent auditor "to determine the quantitative contribution to BSE rate differences between carriers that is attributable to differences in ... methodological approaches" -- in other words, to conduct a sensitivity analysis.[61] In contrast to the Bureau's more reasoned approach, AT&T presents a sensitivity analysis of results produced by a model it does not have, has not actually replicated, and has not evaluated. AT&T's consultants developed their own model but admit that some of their assumptions may have been different from Pacific's (AT&T, App. F, p. 3). AT&T assumed without evidence that Pacific Bell's retiree age and sex distribution is the same as AT&T's, assumed that surviving spouses of deceased participants are covered (which they are not in the Pacific Companies' plan), ignored Pacific's coverage of dependents other than spouses, and failed to value dental benefits explicitly. It also appears that AT&T's computational methods were different from Pacific Bell's. Obviously, all of these arbitrary shortcuts affect the sensitivity analysis

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61 Commission Requirements for Cost Support Material To Be Filed with Open Network Architecture Tariffs, Memorandum Opinion and Order, DA 92-129, released January 31, 1992, para. 63.

results. Taken together they may render it useless. The results of AT&T's sensitivity analysis are inherently unreliable.

AT&T (p. 23 and App. G) contends that several LECs are incurring a high percentage of their overall projected SFAS 106 expense currently through cash pay-as-you-go expenses, which tends to show that for other LECs, the OPEB assumptions are less reliable. AT&T's contention ignores an important fact. A company's ratio of active to retired employees has a tremendous effect on the difference between current pay-as-you-go expenses and SFAS 106 accrued expenses. SFAS 106 cost recognition reflects an amount accruable for all current participants, both retired and active; pay-as-you-go accounting recognizes expenses for retired participants only. Due to different ratios of active to retired participants, different carriers could have completely different ratios of pay-as-you-go to accrued expense even if they used identical accrual assumptions.

Moreover, the amount of funding which varies from no funding (Southwestern Bell) to significant funding (Bell South) has a material effect on the incremental difference between the pay as you go ("cash") costs and the SFAS 106 accrual. These differences make comparisons among LECs meaningless.

Appendix 8 of Pacific's Direct Case was the testimony of John M. Bertko who is a partner with the Actuarial, Benefits and Compensation Consulting Group of Coopers & Lybrand and a senior health actuary with Coopers & Lybrand. Mr. Bertko reviewed the work of Pacific's own actuary, the actuarial methods used for the funding and accounting calculations, the assumptions chosen for

the liability and expense calculations, the supporting data and the manner in which the calculations were used in connection with SFAS 106. Mr. Bertko substantiated that Pacific followed generally accepted actuarial methods appropriate for SFAS 106 and confirmed the reasonableness of Pacific's calculations. As explained above, the parties opposing OPEB recovery have provided no reasonable basis to dispute Mr. Bertko's conclusion.

III. CONCLUSION

For all of the foregoing reasons, Pacific Bell's Transmittal No. 1579 should be allowed to take effect as filed. Price cap LECs should be permitted to recover incremental OPEB costs through adjustments to the price cap formula.

Respectfully submitted,

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E X H I B I T 1

Exhibit 1

THE TREATMENT OF SFAS 106 ACCOUNTING CHANGES UNDER FCC PRICE CAP REGULATION REPLY COMMENTS

Prepared for
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William E. Taylor and Timothy J. Tardiff
Study Directors

July 29, 1992

I. REPLY TO AD HOC AND ICA

Ad Hoc and ICA[1] assert that (i) cost changes stemming from the Commission's adoption of SFAS 106 for regulatory accounting are not exogenous cost adjustments as defined in the Commission's price cap plan, and (ii) that the price cap LECs have failed to prove that their proposed exogenous cost adjustments are free from double-counting with the GNP-PI. Ad Hoc and ICA rely on a report written by Economics and Technology, Inc., (ETI).[2] ETI brings no facts or analysis of its own to this deliberation but makes unsupported assertions that the studies provided by the LECs are flawed. These assertions, in turn, ignore critical features of NERA's position,[3] misstate our arguments, and raise issues labeled as critical that are either irrelevant or nonsensical.

A. SFAS 106 Cost Changes are Exogenous and Should Receive Z-factor Treatment

Ad Hoc (pp. 12-17) contends that SFAS 106 cost changes should not be accorded exogenous cost (Z-factor) treatment because the price cap carriers fail "to meet their burden of demonstrating" (p. 12) four alleged requirements of exogenous costs: (i) the absence of double counting with the GNP-PI (p. 12), (ii) the inability of the LEC to "influence, or, worse yet, to strategically manipulate costs characterized as exogenous" (p. 13), (iii) the ability of the FCC to

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[1]Ad Hoc Telecommunications Users Committee/Economics and Technology, Inc, and the International Communications Association (ICA) both submitted the ETI report as their major argument. Accordingly, our comments on Ad Hoc's position apply to both Ad Hoc and ICA.

[2]David J. Roddy and Page Montgomery, "Analysis of FAS 106 Effects Under Price Caps: A Test Case for LEC Price Cap Regulation by the FCC," Economics and Technology, Inc., July 1, 1992.

[3]William E. Taylor and Timothy J. Tardiff, "The Treatment of FAS 106 Accounting Changes Under FCC Price Cap Regulation," National Economic Research Associates (NERA), April 15, 1992.

review these costs (p. 16), and (iv) that absence of exogenous cost treatment for SFAS 106 changes would produce prices that are confiscatory (p. 17).

We will address the double-counting issue in Section I.B below. The requirement that prices must fall to a confiscatory level before exogenous cost treatment is accorded is based on a misreading of the Commission's price cap plan and a misunderstanding of the role of exogenous cost changes in economics. The purpose of the exogenous cost change in the price cap plan is to permit price changes to track cost changes whenever such tracking will not destroy the LEC's incentive to minimize cost. Thus economic efficiency is enhanced whenever any exogenous cost change (positive or negative) is accorded Z treatment, provided the change is truly beyond the control of the firm. There is no requirement, expressed or implied, in the FCC price cap plan or in economic theory, that positive Z-adjustments should not be allowed unless the cost change is of such magnitude that ignoring it would drive earnings to a confiscatory level.

1. Management control over OPEB costs

The second claim--that SFAS 106 cost changes should not receive exogenous treatment because management maintains some control over post-retirement benefits--is apparently based on a misreading of the price cap carriers' proposal for exogenous cost treatment for SFAS 106 cost changes and a misunderstanding of exogeneity in the price cap rules.

a. Exogeneity in the price cap plan

There is a basic confusion in the comments of Ad Hoc and ICA concerning exogenous events and exogenous costs. An exogenous event (*e.g.*, a change in the separations rules) is an event that is beyond the control of the price cap-regulated LEC. That event has consequences for the LEC's regulated costs, and the purpose of the Z-factor adjustment is to require the LEC to pass through changes in costs caused by the exogenous event in the form of changes in its price

cap index (PCI). There is no requirement (and should be no requirement) that the costs that are changed by the exogenous event are, themselves, beyond the control of management.

Take, for example, a separations change as the prototypical example of an exogenous event, as we noted in our initial report. The Commission's discussion of separations changes as an exogenous event is clear:

> "...we will require an exogenous cost treatment for changes in interstate costs for LECs that are caused by changes in the Separations Manual. As we explained in the Second Further Notice, these changes are imposed by regulators and are outside the control of the carriers...Regulatory decisions that are designed to produce just and reasonable rates must affect the cap in order to ensure that the system results in rates that are just and reasonable."[4]

Thus, even though interstate costs are under the continuous, on-going control of the LEC, the Commission requires Z-factor treatment for an exogenous event that changes those costs.

The Commission's adoption of SFAS 106 for regulatory accounting exactly parallels its rationale and actions in the separations issue. Even though OPEB costs are under continuing and on-going management control, the change in those costs brought about by the exogenous event--the adoption of SFAS 106 for regulatory accounting--is as appropriate a Z-factor adjustment as a change in the separations rules.

b. One-time, not on-going, cost changes

It follows from the above discussion that if the event in question occurs only once, there would be only a one-time Z-factor adjustment. Ad Hoc's criticisms of exogeneity apply to Z-factor treatment of on-going OPEB costs, not the one-time change in OPEB costs caused by the exogenous event: the change from cash to accrual accounting for OPEB costs.[5] Anticipating this

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[4]Second Report and Order, CC Docket 87-313, released October 4, 1990, ¶ 167.

[5]On page 14, Ad Hoc cites the Commission's treatment of equal access expenses and changes in depreciation expense as "clearly pertinent to this issue." Moreover, on p. 15, Ad Hoc claims that Z-factor treatment "could well prove a disincentive to controlling the costs of OPEB..." These examples are pertinent only in considering Z-factor treatment for all future changes in OPEB costs. They demonstrate clearly why on-going changes in OPEB costs are not exogenous. However, they do not apply to the proposal at hand: a one-time Z-factor adjustment to move from cash to accrual

confusion, we explained the difference between on-going and one-time exogenous cost treatment on pages 18-22 of the NERA report. The Z-factor adjustment calculated in our report was a one-time Z-factor adjustment that would align the PCI more closely with economic costs: *i.e.*, with accrual accounting for OPEBs. Subsequent to this adjustment, LEC management would control post-retirement benefit expenses under price caps just like any other labor (or nonlabor) expense category.

One-time adjustments towards just and reasonable rates in no way undermine management's incentives under price caps. Thus ETI's (p. 2) allusion to potential cost savings resulting from the LEC's employment reduction programs is not germane. There is no dispute that LEC management will realize cost savings from labor-saving programs (consisting of both wage and benefit components) when it is efficient to do so. This outcome occurs regardless of the price levels at the beginning of the price cap plan. Similarly, Ad Hoc's complaints (pp. 13-14) that OPEB obligations "are not legally binding" and that employees "may never receive OPEBs" do not confer a windfall on the LECs. LECs' incentives regarding future OPEB payments are identical to their incentives regarding other forms of labor compensation (*e.g.*, wages). If they can reduce labor costs in the future by controlling the growth of wages or OPEB payments, they should benefit from such productivity increases under the price cap plan. If wages or OPEB payments grow so that the productivity target is unattainable, the LECs' earnings should fall.

2. The FCC's ability to evaluate SFAS 106 cost changes

The "numerous disputes" that the Commission would be required to resolve in Ad Hoc's third claim (p. 16) would not occur. Evaluation of the actuarial and inflation assumptions underlying the SFAS 106 change would occur only once, because the exogenous event in question--

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accounting.

the FCC's adoption of SFAS 106 for regulatory accounting--occurs only once. The evaluation of cost changes stemming from the adoption of SFAS 106 will have to be done regardless of the Z-factor treatment of the cost change because costs reflecting accrual accounting for OPEBs must be used for calculating the LECs' rates of return for sharing calculations under the price cap plan. The evaluation of the ensuing cost change is no more difficult than the evaluation of the LEC's cost of capital. Moreover, every U.S. firm that offers OPEBs has made (or will make) such calculations as part of their implementation of SFAS 106.

B. Response to ETI's Specific Criticisms of NERA's Report

ETI has presented several specific criticisms of the NERA report. In no case did the authors attempt to identify and quantify how the alleged problem biases the estimate of the impact of SFAS 106 on GNP-PI. In fact, the criticisms are irrelevant, exhibit a lack of understanding of NERA's study, or reflect criticisms that if true, would reduce our estimate of the impact of SFAS 106 on GNP-PI.

1. Definition of the cost-plus sector

ETI argues that we have overestimated the size of the cost-plus sector (p. 22) because (i) some defense contractors have "moved away from" contracts which pass through accounting changes and (ii) not all electric, gas and telephone utilities would be permitted to pass through these accounting cost changes. We agree and so stated in our report (p. 32):

> "The estimate of the effect of FAS 106 on the GNP-PI is an upper bound [emphasis added] for several reasons. First we have overstated the size of the cost-plus sector of the economy by assuming that all public utility prices are set using accounting costs and treating all government contracts as cost-plus contracts with accounting change escalators."

Suppose, then, ETI and NERA are both correct, and the set of firms that will pass through SFAS 106 accounting cost changes directly in price changes is smaller than the set assumed in the NERA report. What would be the effect on NERA's results? Obviously, the smaller the cost-plus sector in the U.S. economy, the smaller the direct effect of price changes in the cost-plus sector on the GNP-PI. That is the reason why NERA characterized its estimate (of the effect of SFAS 106 on the change in the GNP-PI) as an upper bound. The true effect of SFAS 106 on inflation will be smaller than that calculated in the NERA report, for reasons given by ETI on page 22 and by NERA on page 32.

2. Transactions between cost-plus and other firms

On page 23, ETI asserts that

> "NERA erroneously (and incredibly) assumes that a 1.96% increase in the prices of their "cost plus" sector...would have no effect on prices of the other sectors in the economy."[6]

The assumption is indeed "incredible," and NERA's report in no way made that assumption. ETI explains their reasoning, as follows:

> "...the report missed a rather large economic effect. The "other" sector, the non-"cost plus" firms all buy heavily from the industries shown above, especially telecommunications. Since these business (sic) would incur 1.96% price increases using NERA's scenario under exogenous treatment of FAS 106, these "other" sector firms would have cost increases some of which they would pass on to the ultimate consumers. Of course all of this inflation would eventually work its way into the GNPPI and the LECs would be afforded another opportunity to increase prices. Where did NERA's analysis go wrong? For onething (sic), the report assumed that the "other" sector buys nothing at all from the cost plus sector. Examination of the industries in that sector make it clear that this assumption is absurd. Economists generally discuss such effects in input-output models; somehow this issue was totally ignored by NERA." (pp. 24-25)

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[6]In this passage (and others) ETI misquotes NERA's results. The number 1.96 does not appear in NERA's Report. NERA showed (pp. 26-27) that the percentage change in 1993 expenses from the adoption of SFAS 106 was 1.92. However, in our calculation of the effect of FAS 106 on GNP-PI, we assumed that cost-plus firms would experience the U.S. average OPEB expense increase of 1.10 percent rather than the Pacific Bell increase of 1.92 percent (pp. 31-32).

On the contrary, NERA assumed that firms in the other sectors in the economy fully and completely passed through changes in input prices from the cost-plus sector in their output prices.

A change in GNP-PI is an expenditure-weighted average of the change in all final goods prices for the components of GNP. In NERA's report, cost-plus firms increase prices by 1.92 percent. Some portion of the output of cost-plus firms is purchased by final consumers, and GNP-PI will directly increase by the product of 1.92 percent and the revenue weight of the directly-consumed portion of the cost-plus sector. That product is the direct effect on GNP-PI.

The remainder of the output of cost-plus firms is purchased as inputs by other firms and has an indirect effect on GNP-PI. The NERA Report assumes that these firms pass through the 1.92 percent price increase completely in the prices they charge for their outputs. Assuming full pass-through, the indirect effect on GNP-PI is the product of 1.92 percent and the revenue weight of the indirectly-consumed portion of the output of the cost-plus sector.[7]

The total effect of the 1.92 percent price increase on GNP-PI is the sum of the direct and indirect effects. As shown on pp. 29-30 of the NERA Report, the total effect is given by the product of 1.92 percent and the expenditure share of the entire cost-plus sector. When NERA shows that:

> "the overall price level in the U.S. would increase by less than 0.20 percent in 1993 when accrual accounting is implemented,"[8]

NERA is assuming full pass-through of the 1.92 percent cost-plus sector price change by all firms that purchase cost-plus sector products as inputs.

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[7]Alternatively, the indirect effect can be calculated using an input-output matrix by first multiplying the 1.92 percent price change by the cost share of the output of the cost-plus sector viewed as inputs to the "other" sector to determine the price increase in the "other" sector (assuming full pass through). The product of this number and the expenditure weight of the "other" sector will equal the indirect effect of the 1.92 percent price increase in the cost-plus sector. It is simple to show that these two methods of calculating the indirect effect yield exactly the same result.

[8]NERA Report, pp. 29-30.

Moreover, assuming less-than-full pass through of the 1.92 percent price change would lower the calculated effect of SFAS 106 changes on GNP-PI. The NERA report notes that:

> "Second, this calculation ignores second-order effects that would lower [emphasis added] the impact on national output prices. As prices rise in the cost-plus sector, for example, consumers substitute away from these goods and services which reduces the net effect of the price increase in the cost-plus sector on overall inflation." (pp. 32-33)

Consumers of the outputs of cost-plus goods and services include firms that use these as inputs. The process of consumer substitution described above leads to less than a full pass-through of the cost-plus sector's price increase to the prices of firms buying such inputs. Again, NERA assumed full pass-through of cost-plus sector price changes, and that assumption produces an estimate (of the effect of SFAS 106 adoption on the growth in GNP-PI) that is, if anything, too high.

3. Changing prices that were used to develop the productivity offset

On page 25, ETI claims that

> "NERA advocates changing prices that were used in the development of the 3.3 productivity offset; this would require adjustment of all of the data used to develop the LEC price caps formulae."

The only support for this claim is a citation from the NERA report:

> "Prices under price caps were initially set using cash accounting for postretirement benefits. Thus a change in the price cap is necessary so that prices will reflect the economic cost of service."

ETI concludes from these sentences that "the prices used by the FCC were wrong and should be adjusted," and that "(i)f the FCC accepts NERA's argument, then the whole price cap formula must be...recalculated...in order to be consistent." (p. 25)

ETI somehow equates our position that current prices do not fully reflect the economic costs of providing post-retirement benefits with the proposition that every study that relied on historical prices must be redone. This argument misstates what we said. There is nothing in our report that "advocates changing prices that were used in the development of the 3.3 productivity

offset."(p. 23) We strongly disagree with the claim that adjusting price caps on a going forward basis necessarily requires adjustments to previous productivity calculations.

Take a current (hypothetical) separations change--a prototypical Z-factor adjustment--as an example. Historical prices used to set the current productivity offset did not reflect the separations change because it did not occur during the historical period in question. Moreover, the historical productivity differential was calculated (in part) from prices under the old separations rules, not the new. Nevertheless, in accepting the separations change as a Z-factor adjustment, the Commission would not recalculate the historical productivity offset as if the separations change had occurred during or before the historical period in which the productivity differential was measured. The same standard would apply to SFAS 106.

4. Econometric and statistical estimates

On page 25, ETI faults our Report because we did not employ econometrics or statistics to estimate the effect on GNP-PI attributable to the adoption of SFAS 106. The complaint is without merit. If we had chosen to calculate a point estimate of the effect of SFAS 106 adoption on GNP-PI, some econometric modelling would have been necessary. Because the results depend on firm behavior, a macroeconometric model would have been necessary to determine the degree to which price changes in one sector of the economy affect prices in other sectors and ultimately in GNP-PI. Rather than go through this exercise, however, NERA adopted the conservative assumption that all of the price change would be passed through to final consumers and GNP-PI. That assumption obviates the need to estimate the consequences of firm behavior and produces an upper bound on the effect of SFAS 106 adoption on GNP-PI.

In addition, ETI seems to confuse the complexity of an analysis with its accuracy:

> "It is not possible to believe that the effects of FAS 106, if there is any effect at all, can be analyzed by three numbers," (p. 26).

First, the NERA Report does not analyze the exact effect of SFAS 106 adoption on GNP-PI but rather provides an upper bound to that effect. Second, reasonable estimates of impacts can be and are made all the time with simple models when circumstances warrant. For example, the exact way in which switched access rate changes translate into retail price changes for the myriad of services offered by competing long distance carriers would be difficult to analyze. However, a reasonable assessment of the overall demand stimulation from these rate changes is calculated using three numbers: (i) the access rate change, (ii) the share of access in interexchange carriers' costs, and (iii) the overall retail toll price elasticity.

5. The extent of PBOPs

On page 26, ETI claims that

> "employers...in the cost plus sector would migrate toward 100% PBOP coverage in the entire cost plus sector...At the same time telecommunications carriers would file requests for additional exogenous treatment in future years."

In ETI's view,

> "there is an incentive by the employer to increase PBOP coverage because it is far less costly to the employer than increases in cash wages which can not be passed on at all. The employer could then petition state commissions for "exogenous treatment". NERA completely ignores this effect which would encourage "cost-plus" behavior in an incentive regulation program which has the opposite objective." (p. 26)

ETI has either misunderstood or ignored the one-time nature of the proposed Z-factor adjustment. After prices are adjusted once to account for the change from cash to accrual accounting for OPEB expenses, management would have no incentive to inefficiently substitute OPEBs for other labor expenses because LECs would not be permitted to make annual claims to pass along OPEB costs through Z-factor adjustments. Subsequent to the one-time adjustment, all components of labor compensation -- wages, current benefits, pensions, and OPEBs -- would receive symmetric treatment under price caps.

6. Theory of price cap regulation

On page 26, ETI claims that our mathematical exposition of price cap theory is "incorrect" and "has some serious flaws." Despite the sweeping nature of the indictment, they name only two alleged errors: (i) that "equation (1) on page 7...assumes that the company's rate of return is constant over the time period of the analysis"[9] and (ii) that these formulas incorrectly predicted Pacific Bell's productivity growth under the California New Regulatory Framework.

First, equation (1) on page 6 does not assume that the company's rate of return is constant. Rather, it assumes--as does every study that calculates total factor productivity growth--that the total revenue of the firm is equal to its total expenditures in every period. This derivation and assumption are part of the economic theory of productivity measurement as it is routinely taught to graduate students in economics.[10] Contrary to ETI's claim, neither our approach, nor economic theory assumes a constant rate of return.

Second, ETI's claim that our recent report that evaluated California's price cap program is inconsistent with the price cap theory we present here is false. In fact, had ETI read both reports carefully, they would have noticed that the same mathematical development appeared in each report. ETI's claim of inconsistency is based on the assertions (i) that NERA's formulas

> "led ... NERA to conclude that telephone industry differential productivity growth averaged 2% or less per year,"(p. 27)

and (ii) that NERA's review of the California price cap plan concluded that

> "(b)y themselves, Pacific's earnings during the NRF do not suggest that a productivity target of 4.5 percent is either significantly too high or too low. While not reaching the sharing level, Pacific's earnings were consistent with an average productivity achievement over the period within the range contemplated in the Commission's Decision." (p. 27)

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[9]Equation (1) actually appears on page 6 of the NERA report.

[10]An early exposition of this material is found in D.W. Jorgenson, "The Embodiment Hypothesis," The Journal of Political Economy, February 1966. On pp. 2-3, Jorgenson derives our equation (1), beginning with the assumption that total revenue equals total expenditure in every period: "The fundamental identity for each accounting period is that value of output is equal to value of input...This accounting identity is important in defining total factor productivity," (p. 2).

From these statements, ETI concludes that

> "(t)he formulas which misled NERA in Docket 87-313 should not now be used to justify PBOP exogenous treatment." (p. 27)

Of course, NERA's mathematical derivation of the price cap formula has no bearing on its historical estimates of the productivity differential, any more than an expositor of double-entry bookkeeping is responsible for the bankruptcy of Eastern Airlines. Whether or not estimates of past industry productivity growth are good estimates of future productivity growth for a particular company has no bearing whatsoever on the validity of our mathematical derivation of the price cap adjustment equation. Furthermore, there is absolutely no reason (theoretical or otherwise) to expect that national average telecommunications productivity growth differential for interstate services for the 1984 to 1989 period should exactly match the intrastate productivity growth differential for Pacific Bell for the years 1990 and 1991.

II. REPLY TO AT&T

AT&T apparently agrees that the adoption of SFAS 106 by the FCC constitutes an exogenous event eligible for Z-factor treatment under price caps, except that the degree of management control over OPEB expenses suggests to AT&T that these expenses should be limited. AT&T takes issue with the LECs' estimates of the magnitude of the adjustment. In particular, AT&T questions the validity of the LECs' measurement of the impact of SFAS 106 on GNP-PI, suggests an alternative approach for avoiding double counting impacts already captured in GNP-PI, and criticizes particular details in the LECs' calculation of OPEB liability. We address these issues below.

A. AT&T's Views of the Impact of SFAS 106 on GNP-PI are Incorrect

AT&T argues that because (in its opinion) the LECs have not adequately measured the impact of SFAS 106 on GNP-PI, a more straightforward approach is needed to avoid double-counting.

> "Therefore, the Commission should require the LECs to use an alternative approach that is both a simpler and more reliable means for correcting the double count. AT&T suggests that the appropriate method for removing the double count between the SFAS 106 accrual and the GNP-PI term in the price cap formula is to remove the impact of expected changes in GNP-PI from the SFAS accrual. This can be accomplished in a straightforward manner by requiring the LECs to subtract the expected rate of change of GNP-PI from the health care inflation component in the SFAS 106 accrual." (p. 13)

First, we disagree with AT&T's premise that our measurement of the impact of inflation on GNP-PI is unreliable. Second, assuming *arguendo* that AT&T's premise is correct, its suggested method does not accomplish what a Z-factor adjustment is supposed to do: measure the difference between the change in exogenous costs for the price-cap regulated firm and for the average firm in the economy.[11] AT&T confuses the use of GNP-PI as a measure of the annual change in output prices with its use as a measure of inflation in present value calculations.

1. NERA's double count analysis is valid

AT&T rejects NERA's analysis of the effect of the adoption of SFAS 106 on the GNP-PI because

> "it rests on the empirically unsupported assumption that nonregulated profit-maximizing firms already include the present value of future OPEB costs in their pricing decisions and therefore the imposition of SFAS 106 accounting will not cause any future change in their pricing," (Appendix C, page 2).

AT&T criticizes this assumption because

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[11]Pages 5 to 9 and the Appendix to our report describe the theoretical basis for the Z-factor adjustment. As far as we can tell, AT&T has no disagreement with this price cap theory.

1. "SFAS 106 costs do not, in fact, reflect economic costs because they are based on assumptions of events too far into the future for firms to consider accurate," (Appendix C, page 3)

2. "SFAS 106 costs are also poor proxies for economic costs because the FASB explicitly forbids firms from considering the impact of probable, but not yet approved, legislation such as national health insurance or other government-imposed controls on medical costs," (Appendix C, page 3).

From these observations, AT&T concludes that

> "a much more reasonable assumption is that nonregulated firms are constantly revising their perceptions of costs (and therefore prices) as more accurate information becomes available over time. Firms would tend to put less emphasis on accrued costs and more on cash costs in decision making," (Appendix C, page 4),

so that

> "prices will rise slowly over time as firms integrate better information in their business planning." (Appendix C, pp. 4-5)

First, the uncertain nature of OPEB costs makes them no less economic. There is abundant empirical evidence that firms (including AT&T) voluntarily offer OPEBs to their employees as part of their compensation package. By the mixture of wages and OPEBs offered in their compensation packages, firms demonstrate that they (and their employees) actually trade current costs known with certainty (wages) for future costs (OPEBs) which are subject to uncertainty. Because the evaluation of future costs of OPEBs is uncertain does not make a company's perception of those costs any less of an economic cost than wages or salaries.

Second, like any accounting cost, the FAS 106 treatment of OPEB expenses may differ somewhat from true economic costs, even though its intention is to cause the books of account to reflect the most accurate estimate of the future OPEB liability. Nonetheless, even if the FAS 106 (implicit) estimate of the economic costs of OPEBs differed enormously from the true economic costs, adoption of SFAS 106 would still not cause any unregulated firm to change its price. AT&T concedes precisely this point (on page 3 of Appendix C) where they state that

> "As NERA...correctly points out, firms make pricing decisions based on economic costs and not accounting costs."

Adoption of SFAS 106 (even if it differed from economic costs) would not change the economic costs upon which the firm has made its pricing decisions. Therefore, adoption of SFAS 106 (even if it differed from economic costs) would not cause the unregulated firm to change its price.[12]

Third, AT&T confuses the adoption of SFAS 106 with the availability of more accurate information concerning OPEB costs. By itself, the adoption SFAS 106 should have no direct effect on the pricing decisions of the unregulated firm because (as AT&T agrees) firms make decisions based on economic costs and not accounting costs. While new information about the economic costs of OPEBs becomes available constantly, the adoption of SFAS 106 has no overwhelming effect on the process of information gathering. AT&T is implicitly assuming that firms made pricing decisions based on cash accounting for OPEBs before FAS 106 was implemented and will (slowly) begin to make pricing decisions based on accrual accounting for OPEBs after the implementation of FAS 106. That assumption contradicts the basic economic belief that prices for unregulated firms are determined by economic costs, not accounting costs.

Fourth, AT&T applies its principle that "firms make pricing decisions based on economic costs and not accounting costs," inconsistently in Appendix C. On page 1 (of Appendix C), AT&T claims that "NERA contends that firms in the nonregulated sector adjusted their prices before price caps began for the LECs on January 1, 1991 in anticipation of the SFAS 106 requirement." NERA contended no such thing, and it would be inconsistent with AT&T's recognition that prices are based on economic costs. Firms in the nonregulated sector adjusted their prices to reflect accrual of OPEB expenses when OPEBs were earned, not in anticipation of a change in accounting procedures. Since economic costs, not accounting costs, are the basis for

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[12]Moreover, AT&T has applied its theory inconsistently. It claims that SFAS costs are a poor approximation to economic costs because of various contingencies such as the possibility of national health insurance (Appendix C, p. 3). However, two pages later, it claims that the full difference between SFAS 106 accrual expenses and pay-as-you-go expenses will be reflected in GNP-PI.

prices in the nonregulated sector, implementation of SFAS 106 had nothing to do with nonregulated prices.

Similarly, AT&T seems to think that NERA's estimates implies that

> "the economy will be impacted by almost the entire 1.10% increase in prices as the economy adjusts to the OPEB liability," (Appendix C, p. 5)

and that

> "NERA concludes the economy will be impacted by a 1.1% increase in prices due to SFAS 106 implementation," (Appendix C, p. 1).

NERA concludes no such thing. What NERA did conclude was that

> "firms in the cost-plus sector [emphasis added] increase prices by 1.10 percent in response to FAS 106. Firms in the rest of the economy have already reflected accrual accounting in their prices, so the net effect of FAS 106 on the GNP-PI would be less than 0.12 percent..." (p. 32)

Finally, AT&T proposes an incorrect definition of economic costs that essentially equates cost with cash flow. "Firms would tend to put less emphasis on accrued costs and more on cash costs in decision making." (Appendix C, p. 4) In reality, cash flow is the result of an economic cost and a financing decision, not a cost in itself.

Consider the following example. Two computer-intensive firms offering competitive services to similar clients are purchasing 100 identical personal computers from the same supplier. The first firm pays cash from an annual internal computer budget, while the second firm uses a line of credit it has with the supplier. Both firms have incurred the same economic costs (the value of the 100 computers), but their cash flows are noticeably different because of the different financing decisions. According to AT&T's theory, the two firms would set different prices over time, consistent with the differences in cash flow. In reality, competition would result in these firms establishing similar prices for their services over time, dictated by market conditions, not by year-to-year cash flow.

Because AT&T argues that the full difference between pay-as-you-go and accrual expenses will be passed through into GNP-PI, AT&T's theory implies that true economic costs transition quickly from the cash flow expenses under pay-as-you-go accounting to the accrual expenses under SFAS 106 accounting. This is equivalent to arguing that our two hypothetical computer-intensive firms have different costs because they financed their computers differently.

AT&T went wrong when it ignored or misunderstood two fundamental facts presented in our report: (i) OPEBs are part of the overall compensation package and are a form of deferred compensation[13] (p. 15) and (ii) accounting changes do not change the underlying economic costs (p. 9). Both propositions are widely recognized. For example, the Division of Ratepayer Advocates of the California Public Utilities Commission (which is a consumer advocacy group, not the CPUC's staff) noted:

> "Over the course of the FASB's deliberations on this subject [FAS 106], a consensus of the accounting and financial professions and in the business community concluded that PBOPs [OPEBs] constitute deferred compensation, whereby an employer promises to exchange future benefits for employees' current services."[14]

Therefore, the firm incurs the economic cost of OPEBs when the employment decision is made, not when the deferred benefits are paid. Similarly, AT&T chose to ignore the evidence we presented on the lack of impact of a similar recent accounting change (FAS 87 for pensions) and the expectation in the financial community that adoption of SFAS 106 will have no impact on the stock prices of unregulated firms.

In summary, AT&T has offered an unsupported and internally inconsistent theory of economic costs as an alternative to NERA's fundamental assumption that prices in the unregulated

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[13]AT&T (p. 18) does acknowledge that OPEBs are one aspect of the overall compensation package. This acknowledgment is apparently without the understanding that the economic cost is incurred when the commitment to provide deferred compensation in the form of OPEBs occurs.

[14]Division of Ratepayer Advocates, California Public Utilities Commission, Report on Statement of Financial Accounting Standards No. 106, November 15, 1991.

sector are determined by economic costs, not accounting costs. Its analysis has no basis in economic or finance theory.

2. AT&T's double count correction is incorrect

AT&T's suggested calculation amounts to the following exercise. First, calculate expected OPEB expenses in constant dollars.[15] Next, discount these expenses at a nominal discount rate to calculate the present value of the SFAS 106 accrual. The first problem with this procedure is that mixing constant dollars and nominal discount rates is never appropriate in present value calculations. The resulting present value of the SFAS 106 accrual has no meaningful interpretation.

A second problem with AT&T's method is that the calculation does not answer the proper question. This problem can be illustrated by a particular example. Suppose a single LEC under price caps operates efficiently by engaging in firm contracts with workers with special skills from another part of the country or world. The contract is for one year's duration,[16] at which time these workers inevitably return home. Suppose further that the LEC's regulators have just mandated that these temporary workers be provided with a package of benefits at the end of the contract. This package is now worth $10,000, but the price of the package is known to be escalating at 10 percent per year.

The new benefits mandated by the regulators have the effect of increasing the cost per worker for the LEC. And since only the single LEC is affected, any impact on GNP-PI can be assumed to be de minimis. Indeed, labor costs per worker are increased by the present value of

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[15]AT&T's recommendation to subtract GNP-PI from medical inflation produces projections of OPEB expenses in constant (real) dollars.

[16]The terms of the contract, *e.g.*, wage rates and benefits and the number of workers employed each year, are fixed under a long term arrangement with the supplier of the special workers.

the benefit package. For example, if the LEC's discount rate is also 10 percent, its costs have increased by exactly $10,000 as a result of the mandated benefit package.

Under AT&T's proposal, the LEC would be able to reflect less than the full cost in its Z-factor adjustment. The $11,000 cost of the package after a year of inflation would first be deflated by the overall inflation in GNP (say 4 percent), resulting in a constant dollar value of about $10,600. When this value is discounted at 10 percent, the resulting calculated present value is about $9,600. Now, the GNP-PI adjustment, which the LEC always used in its annual price cap adjustment, offsets none of the shortfall. Before the mandated benefit package, the GNP-PI adjustment exactly accounted for the LEC's expected costs, as price cap theory demonstrates. After the program is mandated, GNP-PI has not changed, by assumption, so that the LEC price cap falls short of recovering the mandated costs by about $400 per worker.

B. Management Control over OPEB Expenses

Like ETI, AT&T confuses exogenous events with exogenous costs. On page 24, AT&T claims that

> "Because of the measure of control that LECs have over their actual OPEB expense levels, the necessarily speculative nature of the current SFAS 106 OPEB accruals, and the "obvious and strong incentives" that carriers have to inflate their price cap rates exogenously, there is a substantial risk that if the LECs get full exogenous treatment, their rates would be uneconomically high as compared to their actual OPEB expense levels."

As an example, AT&T cites the following strategy:

> "...a LEC could choose not to curtail its OPEB program (because expense recovery is assured), but it could instead limit future wage and salary increases which are treated endogenously." (p. 25)

The exogenous event in question is the Commission's adoption of SFAS 106 for regulatory accounting. The exogenous cost change which stems from that event is a one-time